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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
RYMAN, DANIEL J	
ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 07/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/839,957	WENDORF ET AL.	
	Examiner	Art Unit	
	Daniel J. Ryman	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-33* is/are rejected.

7)☒ Claim(s) *4,9 and 27* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6/9/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Examiner acknowledges Applicant's filing of an RCE on 6/9/2006.

2. Applicant's arguments with respect to claims 1-32 have been considered but are moot in view of the new ground(s) of rejection.

Claim Objections

3. Claim 4 is objected to because of the following informalities: in line 3, "a current time" should be "the current time". Appropriate correction is required.

4. Claim 9 is objected to because of the following informalities: in line 11, "for modifying" should be "modifying". Appropriate correction is required.

5. Claim 27 is objected to because of the following informalities: in line 6, "current TDT counter value and said time parameter" should be "current time counter value and said TDT parameter. Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fan et al. (USPN 6,408,005), of record, in view of Hughes et al. (USPN 5,835,494).

8. Regarding claims 1, 9, 17, and 25, Fan discloses a method, a scheduling system containing a memory module for storing a plurality of buffers (col. 15, lines 45-59), and

software, the method and software comprising the steps of and the system comprising means for: calculating a Theoretical Departure Time (TDT) parameter associated with a buffer, the buffer containing a plurality of data units (where TS, i.e. the "Theoretical Departure Time parameter," is calculated, col. 16, lines 7-15; where the TS is associated with a queue, i.e. a "buffer," col. 15, lines 58-59; and where the queue contains a plurality of cells, i.e. "data units," see col. 15, lines 62-65 ("the first cell in the associated queue" implies that each queue has multiple cells)); determining a position of said buffer on a time scale based on the Theoretical Departure Time parameter associated with said buffer and a current time counter value (col. 16, line 5-col. 17, line 5, where TS is compared to the current time, CT, to determine if the queue is ready to be served); and modifying a signal prompting selection of said buffer for release of at least one data unit of said plurality of data units based on said position on said time scale (col. 16, line 5-col. 17, line 5, where a queue is signaled as being ready to be served if the TS is less than or equal to CT).

Fan does not expressly disclose calculating the TDT parameter based on an Inter Cell Gap (ICG) parameter. However, Fan does disclose calculating TDT based on the reciprocal of the minimum rate (col. 16, lines 53-66, where TS is calculated using 1/Mi and where Mi is the minimum rate, see col. 9, lines 40-42). Specifically, Fan teaches that the "scheduler paces the cells of each stream queue such that the spacing between cells belonging to the same stream is no smaller than the reciprocal of the minimum rate" (col. 8, lines 25-28). As such, Fan discloses calculating the TDT parameter based on the reciprocal of the minimum rate to ensure that the spacing of cells belonging to the same stream is no smaller than the reciprocal of the minimum rate.

Hughes teaches, in a scheduling system, calculating a desired service time value based on ICG (col. 3, lines 41-43), where the ICG "indicates how many cell slots should elapse between successive transmissions of cells for the virtual connection that corresponds to the entry" (col. 5, lines 28-31). The "inter-cell gap for any given virtual connection may easily be determined by the formula: (transmit device transfer rate)/(virtual connection transfer rate) = inter-cell gap" (col. 5, lines 35-38). Thus, while Fan discloses determining spacing based on the reciprocal of the minimum guaranteed rate, i.e. determining spacing based on the amount of time that should elapse between successive transmission of cells from the same stream, Hughes discloses determining spacing based on the transmit device transfer rate multiplied by the reciprocal of the minimum guaranteed rate, i.e. determining spacing based on the number of cell slots that should elapse between successive transmissions of cells from the same stream.

In sum, the only difference between Hughes, who uses ICG, and Fan, who uses the reciprocal of the minimum rate, is that Fan measures the spacing between cells from the same connection in units of time while Hughes measures the spacing between cells from the same connection in units of cells slots. As such, it would have been obvious to one of ordinary skill in the art at the time of the invention to calculate the TDT parameter based on an Inter Cell Gap (ICG) parameter of Hughes, rather than the minimum guaranteed rate of Fan, since ICG is a well-known parameter that relates the minimum guaranteed rate with the transfer rate of the device in order to give a cell spacing in units of cells slots rather than units of time.

9. Regarding claims 2, 10, 18, and 26, Fan in view of Hughes discloses that the network is an Asynchronous Transfer Mode Network (Fan: col. 1, lines 10-13).

10. Regarding claims 3, 11, 19, and 27, Fan in view of Hughes discloses comparing the TDT of said buffer with a current time counter value (Fan: col. 16, line 5-col. 17, line 5, where TS is compared to the current time, CT, to determine if the queue is ready to be served); and incrementing a counter related to said signal if a difference between said current time counter value and said TDT parameter is greater than zero (Fan: col. 17, line 64-col. 18, line 5, where fi, i.e. the "counter," is incremented when CT is greater than TS in order to flag the system that the queue is active and ready for service).

Fan in view of Hughes does not expressly disclose incrementing a counter related to said signal if a difference between said current time counter value and said TDT parameter is greater than twice the value of a predetermined departure parameter. However, Fan in view of Hughes does discloses checking for a condition to see if the timestamp falls behind current time by a designated amount, which is greater than the value of a predetermined departure parameter, to determine if the queue needs to be "caught up" (Fan: col. 16, lines 40-50, where the predetermined departure parameter is 1/M, which is the reciprocal of the minimum guaranteed rate). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to increment a counter related to said signal if a difference between said current time counter value and said TDT parameter is greater than the value of a predetermined departure parameter in order to flag the system that the queue needs to be caught up.

Fan in view of Hughes does not expressly disclose that the difference is greater than twice the value of a predetermine departure parameter; however, Fan in view of Hughes does disclose that the difference is greater than the value of the predetermined departure parameter (Fan: col. 16, lines 40-50, where the predetermined departure parameter is 1/M, which is the

reciprocal of the minimum guaranteed rate). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Fan in view of Hughes discloses checking to see if the difference is greater than an amount, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any amount, including twice the value of the predetermined departure parameter, absent a showing of criticality by Applicant.

11. Regarding claims 4, 12, 20, and 28, Fan in view of Hughes discloses comparing the TDT of said buffer with the current time counter value (Fan: col. 16, line 5-col. 17, line 5, where TS is compared to the current time, CT, to determine if the queue is ready to be served); and decrementing a counter related to said signal if a difference between said current time counter value and said time parameter is lower than zero (Fan: col. 17, line 64-col. 18, line 5, where fi, i.e. the "counter," is decremented when CT is less than TS in order to flag the system that the queue is not active).

Fan in view of Hughes does not expressly disclose decrementing a counter related to said signal if a difference between said current time counter value and said time parameter is lower than twice the value of a predetermined departure parameter. However, Fan in view of Hughes

does discloses checking for a condition to see if the timestamp falls behind current time by a designated amount, which is greater than the value of a predetermined departure parameter, to determine if the queue needs to be "caught up" (Fan: col. 16, lines 40-50, where the predetermined departure parameter is 1/M, which is the reciprocal of the minimum guaranteed rate). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to decrement a counter related to said signal if a difference between said current time counter value and said time parameter is lower than the value of a predetermined departure parameter in order to flag the system that the signal does not need to be caught up.

Fan in view of Hughes does not expressly disclose that the difference is greater than twice the value of a predetermine departure parameter; however, Fan in view of Hughes does disclose that the difference is greater than the value of the predetermined departure parameter (Fan: col. 16, lines 40-50, where the predetermined departure parameter is 1/M, which is the reciprocal of the minimum guaranteed rate). It is generally considered to be within the ordinary skill in the art to adjust, vary, select, or optimize the numerical parameters or values of any system absent a showing of criticality in a particular recited value. The burden of showing criticality is on applicant. In re Mason, 87 F.2d 370, 32 USPQ 242 (CCPA 1937); Marconi Wireless Telegraph Co. v. U.S., 320 U.S. 1, 57 USPQ 471 (1943); In re Schneider, 148 F.2d 108, 65 USPQ 129 (CCPA 1945); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1055); In re Saether, 492 F.2d 849, 181 USPQ 36 (CCPA 1974); In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980). Since Fan in view of Hughes discloses checking to see if a difference is greater than an amount, it would have been obvious to one of ordinary skill in the art at the time of the invention to use any amount,

including twice the value of the predetermined departure parameter, absent a showing of criticality by Applicant.

12. Regarding claims 5, 13, 21, and 29, Fan in view of Hughes discloses that said modifying further comprises: asserting said signal if said counter reaches a set threshold value (Fan: col. 16, lines 40-50, where the threshold value is 1, such that the system would be signaled that the queue needs to be caught up).

13. Regarding claims 6, 14, 22, and 30, Fan in view of Hughes discloses that said modifying further comprises: deasserting said signal if said counter reaches a reset threshold value (Fan: col. 16, lines 40-50, where the reset threshold value is 0, such that the system would be signaled that the queue does not need to be caught up).

14. Regarding claims 7, 15, 23, and 31, Fan in view of Hughes discloses selecting said buffer for release of said at least one data unit (Fan: col. 17, lines 10-44, where a particular queue is selected for servicing); and updating said TDT parameter of said buffer with the ICG parameter associated with the buffer where the ICG is a predetermined departure parameter (where Fan discloses updating the TDT by 1/M, or the reciprocal of the minimum rate, Fan: col. 16, line 51-col. 17, line 5, and where Hughes discloses updating a scheduling time based on ICG, as outlined in the rejection of claims 1, 9, 17, and 25, Hughes: col. 3, lines 41-43).

15. Regarding claims 8, 16, 24, and 32, Fan in view of Hughes discloses that said plurality of data units further comprises cells (Fan: col. 1, lines 10-13).

16. Regarding claim 33, Fan in view of Hughes discloses that the ICG parameter is a predetermined departure parameter associated with said buffer (Hughes: col. 3, lines 41-43, where the ICG is used to determine when to transmit a cell).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Daniel J Ryman
Examiner
Art Unit 2616